Ratio practice

Questions - name: _____ date: _____

1. Parts versus a whole

Red and blue counters are in the ratio 3:2. What fraction and percentage of all counters are red? Is 3 divided by 2 the same answer?

2. Reduce decimals

Simplify 1.25:0.75 to positive whole-number parts. Explain why both terms must be multiplied by the same number.

3. Convert units first

Compare 1 metre with 50 centimetres. Write their length ratio in that order using comparable units.

4. Split a total

Share a total of 84 beads in the ratio 2:5. How many belong to each share? Check that the two shares add to 84.

5. Find a corresponding value

A screen has width:height = 16:9. If its width is 1920 pixels, find its height. Is 1920 a width or a combined total?

6. Explain a rounding limit

Split 10 units in the ratio 1:2. Write exact shares first, then round both to two decimal places. Do rounded displays prove the shares are exact?

Use comparable units; show your working.

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Ratio practice

Worked answers - compare the reasoning, not only the result.

1. Parts versus a whole

There are 5 total parts. Red is 3/5 = 60% of the whole. The quotient 3/2 = 1.5 compares red with blue, not red with all counters.

2. Reduce decimals

Multiply both terms by 100: 125:75. Divide both by 25 to get 5:3. Scaling both terms equally preserves the relationship.

3. Convert units first

1 metre = 100 centimetres. The ratio is 100:50 = 2:1. Entering the raw numbers 1:50 would compare different units.

4. Split a total

There are 7 parts; 84 / 7 = 12 per part. The shares are 2 x 12 = 24 and 5 x 12 = 60. Check: 24 + 60 = 84.

5. Find a corresponding value

1920 corresponds to the first term, 16. Height = 1920 x 9 / 16 = 1080 pixels. Use missing-value mode, not split-total mode.

6. Explain a rounding limit

The exact shares are 10/3 and 20/3. Rounded to two decimals they are 3.33 and 6.67. Here they add to 10, but each share is still rounded.

Use comparable units; show your working.

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